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# State of Utah

DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

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May 15, 2001

TO: Internal File

FROM: Joe C. Helfrich, Biologist & Team Lead *JCH*

RE: Vegetation Test Plot Removal, Savage Industries Inc. Savage Coal Terminal C/007/022-AM01C

## SUMMARY:

On April 16, 2001 the Division received an amendment to remove the vegetation test plots located on the southwest corner of the main refuse pile. The test plots were constructed in the Fall of 1987 under the direction of Beaver Creek Coal Company. The objective was to see what effect if any the refuse would have on revegetation efforts. The plots have been monitored on an annual basis through 1999. On August 10, 2000 the Division approved the removal of the refuse to The Sunnyside Cogeneration facility as a fuel source for generating electrical power. This reviewer and representatives from Savage Industries concurred that the data and a summarization of the most recent information were sufficient to evaluate the effects refuse material would have on revegetation success. This Technical Memo is a review of the summary of the final results of the test plot data.

## ENVIRONMENTAL RESOURCE INFORMATION

Regulatory Reference: Pub. L 95-87 Sections 507(b), 508(a), and 516(b); 30 CFR 783., et. al.

## VEGETATION RESOURCE INFORMATION

Regulatory Reference: 30 CFR 783.19; R645-301-320.

### Analysis:

The predominant vegetative cover prior to disturbance is outlined in Volume 2, Chapter nine of the MRP. Appendix 9-1, the test plot data provided in the annual reports and the vegetative information provided in this amendment are adequate to predict the potential for revegetation.

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TECHNICAL MEMO

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**Findings:**

The information provided is adequate to meet the requirements of this section of the regulations.

**MAPS, PLANS, AND CROSS SECTIONS OF RESOURCE INFORMATION**

Regulatory Reference: 30 CFR 783.24, 783.25; R645-301-323, -301-411, -301-521, -301-622, -301-722, -301-731.

**Analysis:**

**Vegetation Reference area Maps**

Plate 9-1, (vegetation), of the current MRP provides for the location of the reference area as well as the vegetation test plots. The revised plate 9-1 submitted in this application deletes the test plot location as anticipated by removal of the refuse.

**Findings:**

Information in the application is adequate to meet this section of the regulations.

**OPERATION PLAN**

**VEGETATION**

Regulatory Reference: R645-301-330, -301-331, -301-332.

**Analysis:**

The vegetation map, (plate 9-1) of the current MRP identifies the former location of the vegetation test plots. The test plots were constructed in the Fall of 1987 under the direction of Beaver Creek Coal Company. The entire research plot is approximately 120' X 140' which has been divided into sixteen subplots to test and compare various reclamation treatments. These treatments included controls, topsoil depths, coarse refuse mixtures and mulches. They are more specifically referenced in Table 1 of the application. The summary is graphed in three different categories, cover, composition and density with a discussion provided for the results of each category. In general the data as graphed indicates that the subplots that performed the poorest contained the most soil and those that performed the best contained equal or greater amounts of refuse.

**Findings:**

Information provided in the application is adequate to meet the requirements of this section of the regulations.

## **RECLAMATION PLAN**

### **GENERAL REQUIREMENTS**

Regulatory Reference: PL 95-87 Sec. 515 and 516; 30 CFR Sec. 784.13, 784.14, 784.15, 784.16, 784.17, 784.18, 784.19, 784.20, 784.21, 784.22, 784.23, 784.24, 784.25, 784.26; R645-301-231, -301-233, -301-322, -301-323, -301-331, -301-333, -301-341, -301-342, -301-411, -301-412, -301-422, -301-512, -301-513, -301-521, -301-522, -301-525, -301-526, -301-527, -301-528, -301-529, -301-531, -301-533, -301-534, -301-536, -301-537, -301-542, -301-623, -301-624, -301-625, -301-626, -301-631, -301-632, -301-731, -301-723, -301-724, -301-725, -301-726, -301-728, -301-729, -301-731, -301-732, -301-733, -301-746, -301-764, -301-830.

### **REVEGETATION**

Regulatory Reference: 30 CFR Sec. 785.18, 817.111, 817.113, 817.114, 817.116; R645-301-244, -301-353, -301-354, -301-355, -301-356, -302-280, -302-281, -302-282, -302-283, -302-284.

**Analysis:**

The permittee has provided a summary and discussion of vegetation test plot data that could be applied to final reclamation practices. There are no areas at the load-out facility currently scheduled for final reclamation. However prior to commencing final reclamation the permittee may wish to consult with the Division's biologist and soil scientist regarding the combined use of refuse with soil as an enhancement media.

**Findings:**

The information provided in this section of the application is adequate to meet the requirements of this section of the regulations.

### **CONTEMPORANEOUS RECLAMATION**

Regulatory Reference: 30 CFR Sec. 785.18, 817.100; R645-301-352, -301-553, -302-280, -302-281, -302-282, -302-283, -302-284.

TECHNICAL MEMO

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**Analysis:**

The permittee has provided a summary and discussion of vegetation test plot data that could be applied to contemporaneous reclamation practices. There are no areas at the load-out facility currently scheduled for contemporaneous reclamation. However the permittee may wish to use this information to prescribe a treatment that would improve the vegetative cover on the topsoil stockpiles.

**Findings:**

The information provided in this section of the application is adequate to meet the requirements of this section of the regulations.

**RECOMMENDATION:**

The amendment is recommended for approval in its present form.